

Updates in the diagnostics of insulinoma

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Introduction: Insulinomas are rare neoplasias with incidence of 1-4 cases per million population annually, but still most common from pancreatic neuroendocrine tumours.

Keywords: Insulinoma, Pancreatic neuroendocrine tumors, hyperinsulinemic hypoglycemia

Purpose: An analysis of the sensitivity and specificity of insulinoma diagnostic methods

Material and methods: Here are discussed diagnostic data of 15 patients with insulinoma between 1993 and 2021 from clinic no. 1 of the surgery department no. 2. Diagnosis rely on clinical presentation, laboratory findings (glycemic profile, glucose levels during hypoglycemic accesses, convulsive attacks, after 40% glucose solution administration, as well as levels of seric insulin and C-peptide) and imagistic methods as ultrasonography (Figure. 2), CT (Figure.3), MRI (Figure .4).

Results: Clinical presentation are dominated by neuropsychic symptoms 13 (86,6%) cases, followed by adrenergic symptoms 10 (66,7%) cases, digestive symptoms 8 (53,3%) cases, and cushingoid manifestations 3 (20%) cases (Figure 1). Glucose levels during hypoglycemic attacks were between 2,0-3,0 mmol/l, after 40% glucose solution infusion - 3,8-5,8 mmol/l. Median level of C-peptide was 4,6 ng/l , of insulin was 32,45 μmol/l. Imagistic was found tumours between 0,8 and 2,5 cm in size, 10 (66,4%) cases in corporeal site (Figure.2 , Figure.4) and 5 (33,6%) cases in caudal site (Figure.3).

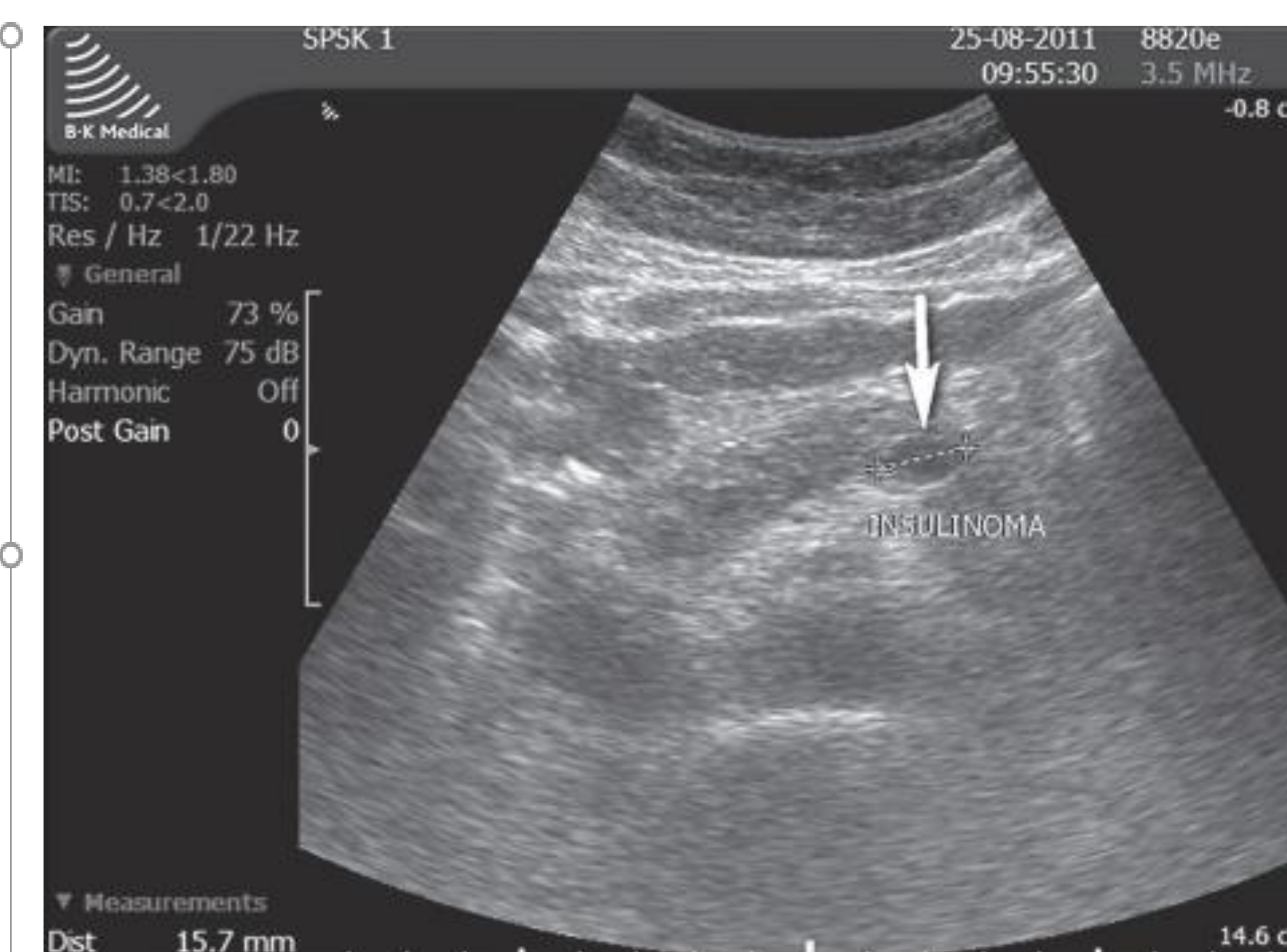
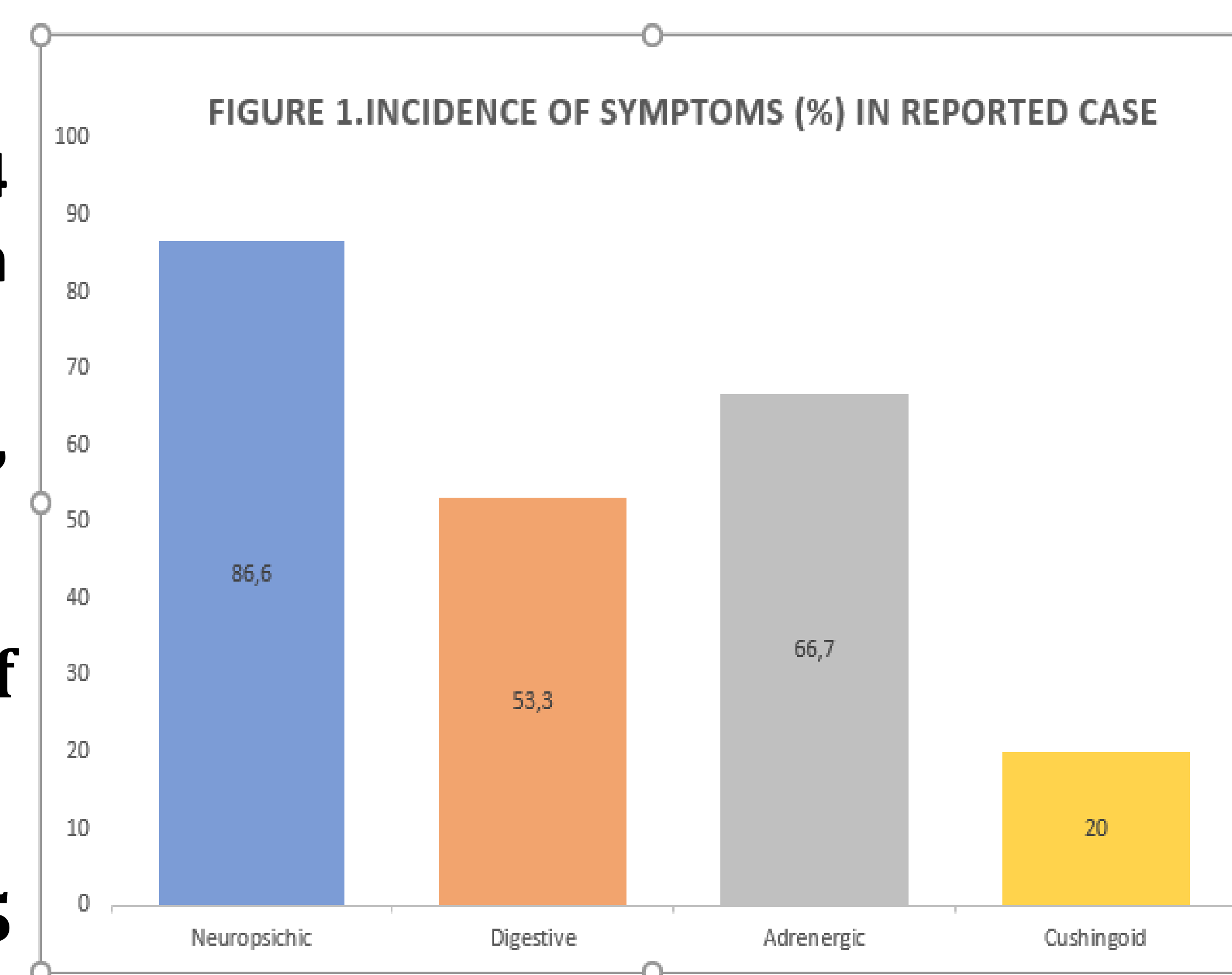


Figure 2. Abdominal Ultrasonography. Insulinoma at the edge of the corpus and bottom pancreas

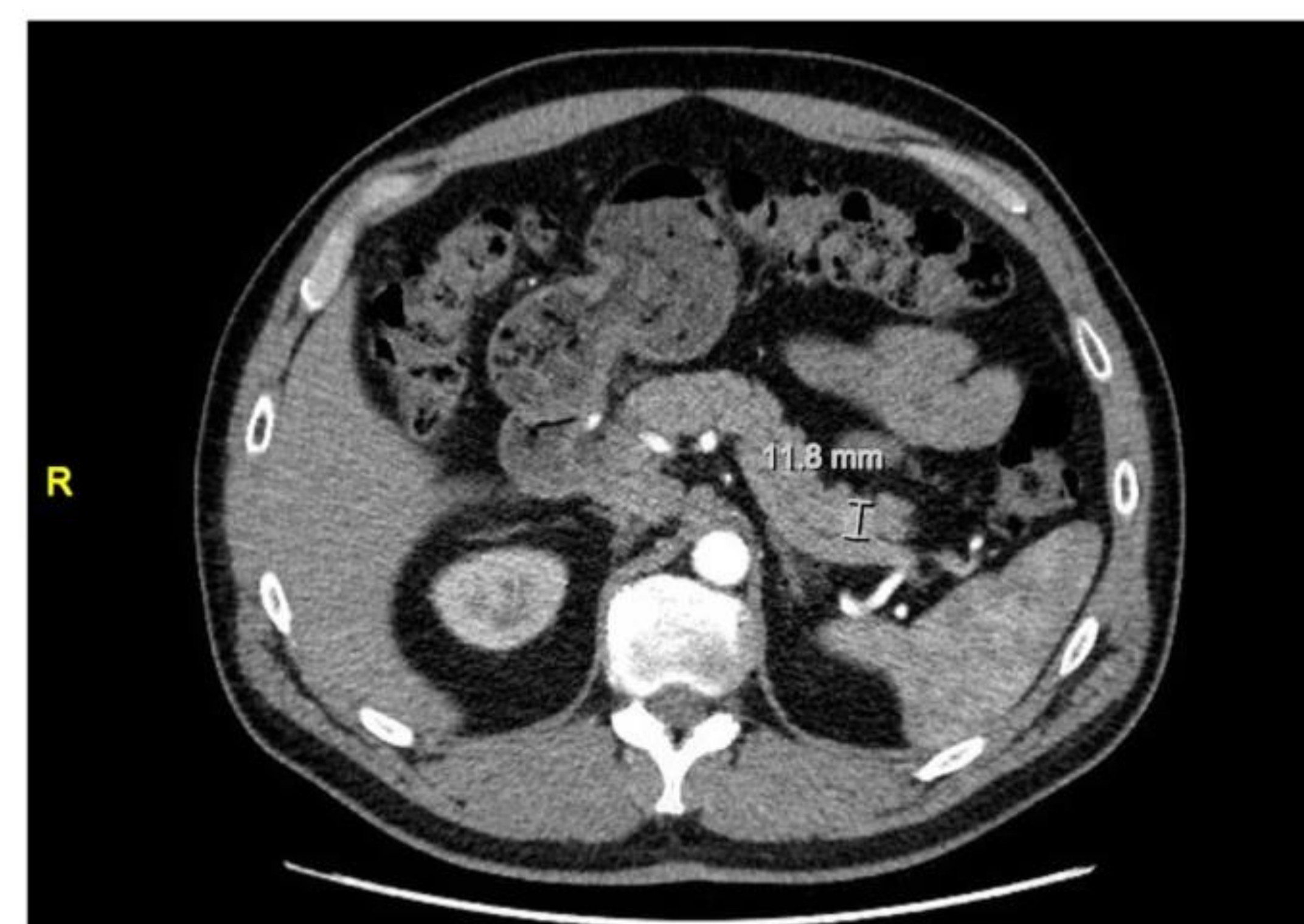


Figure 3. Axial computed tomography of the abdomen. Image demonstrating hyperdense mass lesion at the pancreatic tail (mark).

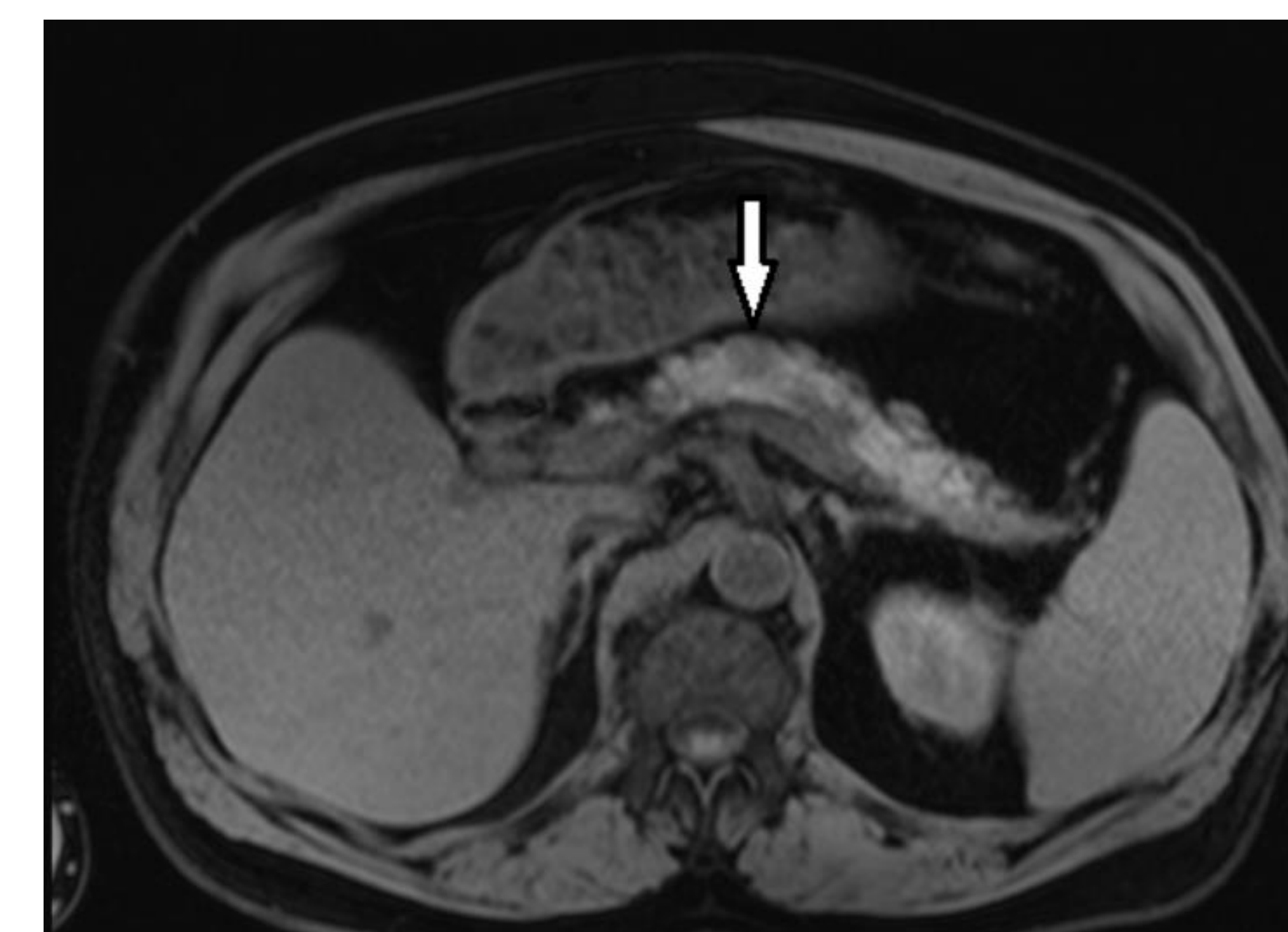


Figure 4. Axial abdominal MRI. T1 fat saturation-normal pancreatic tissue surrounding tumor (arrow) is hyperintense

Conclusions: The diagnostic of an insulinoma is still a dilemma, relying mostly on clinical manifestations and laboratory findings while there are no unanimously accepted imagistical criteria.